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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,705	10/27/2005	Hiroyasu Taguchi	Q75540	9228
23373                      7590                      07/13/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER BASTIANELLI, JOHN				
ART UNIT		PAPER NUMBER		
3753				
NOTIFICATION DATE		DELIVERY MODE		
07/13/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/554,705

**Applicant(s)**

TAGUCHI ET AL

**Examiner**

John Bastianelli

**Art Unit**

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Page No(s)/Mail Date 5/19/10.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-5, 7, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuzawa et al. US 5,755,261 in view of Katayama et al. US 6,401,761.

Fukuzawa discloses an apparatus which is fully capable of handling high purity ammonia gas as the fluid valved having a sealing part 6 which comprises a resin (col. 11, lines 53-55) and the sealing part comprises a sealing part body and an abutting material 11 capable of imparting sealing property by abutting against said sealing part body, and at least the abutting part against the sealing part body of said abutting material comprises a ceramic selected from the group of alumina (col. 12, lines 11-12). Fukuzawa lacks the resin being halogen-free PEEK. Katayama teaches using halogen free PEEK as a resin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the sealing part of Fukuzawa out of halogen free PEEK as disclosed by Katayama as a matter of simple substitution of material and in order to protect the environment as it does not allow any metal or halogen ion to be extracted therefrom. Halogen-free resins of PEEK inherently have a Rockwell surface hardness of R30-R150. Fukuzawa is seen as a cylinder valve (is tubular so is seen as

a cylinder) or line valve (is in a line). The method is seen as practiced by the apparatus as it does not deteriorate the gas purity.

3. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuzawa et al. US 5,755,261 in view of Katayama et al. US 6,401,761 in view of Borland US 5,474,105.

Fukuzawa lacks a separate cylinder valve, pressure regulator, flow controller, line filter, and line valve. Borland discloses a separate cylinder valve 60 or 40, pressure regulator 40, flow controller 60 or 40, line filter 34, and line valve 60 or 40. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a separate cylinder valve, pressure regulator, flow controller, line filter, and line valve as disclosed by Borland in the apparatus of Fukuzawa in order to more accurately control and clean the fluid.

4. Claims 1-2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland et al. US 5,474,104 in view of Katayama et al. US 6,401,761.

Borland discloses an apparatus having a sealing part and/or a gas contacting part 66 or 42, which has a resin and a sealing part, which comprises a sealing part body 66 or 42 and an abutting material 70 or 54 capable of imparting sealing property by abutting against said sealing part body, wherein said sealing part body has a resin, and at least the abutting part against the sealing part body of said abutting material comprises a stainless steel. Borland lacks the resin being halogen-free PEEK. Katayama teaches using halogen free PEEK as a resin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the sealing part of Borland

out of halogen free PEEK as disclosed by Katayama as a matter of simple substitution of material and in order to protect the environment as it does not allow any metal or halogen ion to be extracted therefrom. Halogen-free resins of PEEK inherently have a Rockwell surface hardness of R30-R150, it has a cylinder valve 60 or 40, a pressure regulator 40, a flow controller 60 or 40, a line filter 34, and a line valve 60 or 40. The method is seen as practiced by the apparatus as it does not deteriorate the gas purity.

5. Claims 1-2, 4-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaver et al. US 5,149,105 in view of Katayama et al. US 6,401,761. Beaver discloses an apparatus having a sealing part and/or a gas contacting part 56, which has a halogen-free resin and a sealing part, which comprises a sealing part body 56 and an abutting material 22 capable of imparting sealing property by abutting against said sealing part body, wherein said sealing part body has a material, and at least the abutting part against the sealing part body of said abutting material comprises a stainless steel, a cobalt alloy, a highly corrosion-resistant nickel alloy or a ceramic selected from the group consisting of alumina, aluminum nitride and silicon carbide (col. 3, line 66-col. 4, line 10). Beaver lacks the resin being halogen-free PEEK. Katayama teaches using halogen free PEEK as a resin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the sealing part of Beaver out of halogen free PEEK as disclosed by Katayama as a matter of simple substitution of material and in order to protect the environment as it does not allow any metal or halogen ion to be extracted therefrom. Halogen-free resins of PEEK inherently have a Rockwell surface hardness of R30-R150. Beaver discloses a cylinder valve, a

pressure regulator 40, a flow controller, and a line valve. The method is seen as practiced by the apparatus and is used to for flow of hazardous/corrosive materials which ammonia is.

6. Claim 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaver et al. US 5,149,105 in view of Katayama et al. US 6,401,761 in view of Borland et al. US 5,474,104.

Beaver lacks a line filter. Borland discloses a line filter 34. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the line filter as disclosed by Borland in the valve of Beaver in order to remove contaminants from the fluid.

7. Claims 1-2, 4-5, 7, and 9-10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuzawa et al. US 5,755,261 in view of Katayama et al. US 6,401,761 in view of Floh et al. US 2004/0045605.

Fukuzawa lacks ammonia gas as the fluid. Floh discloses the fluid being ammonia gas. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the fluid of Fukuzawa with ammonia gas as disclosed by Floh in order to be able to safely valve a variety of fluids.

8. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuzawa et al. US 5,755,261 in view of Katayama et al. US 6,401,761 in view of Borland US 5,474,105 in view of Floh et al. US 2004/0045605.

Fukuzawa lacks a separate cylinder valve, pressure regulator, flow controller, line filter, and line valve. Borland discloses a separate cylinder valve 60 or 40, pressure regulator

40, flow controller 60 or 40, line filter 34, and line valve 60 or 40. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a separate cylinder valve, pressure regulator, flow controller, line filter, and line valve as disclosed by Borland in the apparatus of Fukuzawa in order to more accurately control and clean the fluid.

9. Claims 1-2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland et al. US 5,474,104 in view of Katayama et al. US 6,401,761 in view of Floh et al. US 2004/0045605.

Borland lacks ammonia gas as the fluid. Floh discloses the fluid being ammonia gas. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the fluid of Borland with ammonia gas as disclosed by Floh in order to be able to safely valve a variety of fluids.

10. Claims 1-2, 4-7 and 9-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Beaver et al. US 5,149,105 in view of Katayama et al. US 6,401,761 in view of Floh et al. US 2004/0045605.

Beaver discloses flow of hazardous/corrosive fluids but lacks specifically ammonia gas as the fluid. Floh discloses the fluid being ammonia gas. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the fluid of Beaver with ammonia gas as disclosed by Floh in order to be able to safely valve a variety of fluids.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beaver et al. US 5,149,105 in view of Katayama et al. US 6,401,761 in view of Floh et al. US 2004/0045605 in view of Borland et al. US 5,474,104.

Beaver lacks a line filter. Borland discloses a line filter 34. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the line filter as disclosed by Borland in the valve of Beaver in order to remove contaminants from the fluid.

### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-2 and 4-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Bastianelli whose telephone number is (571) 272-4921. The examiner can normally be reached on M-Th (8-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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